## **ABSTRACT**

[0077] Orthopedic implants which include the components of zirconium or zirconium-based alloys having surfaces coated with oxidized zirconium or alternatively, other orthopedic implants comprising abrasion resistant surfaces contacting surfaces of cross-linked polyethylene are disclosed. Such implants provide low friction, highly wear resistant coatings especially useful in artificial joints, such as hip joints, knee joints, elbows, etc., but also useful in other implant devices as well. The implants also find use as vertebral disc prostheses.